

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A manually operable pump for removing fluids from a body cavity of a subject, said pump comprising:

- a fluid-tight pump body having a first end and a second end with a compressible center portion disposed between said first end and said second end,
- an inflow connector attached to said first end, said inflow connector being adaptable for connection to an inflow conduit,
- an outflow connector attached to said second end, said outflow connector being adaptable for connection to an outflow conduit,
- an inflow one-way valve disposed between said inflow connector and said pump body, said inflow one-way valve being adapted to permit flow of fluid from said inflow conduit through said inflow connector and into said pump body but restricting backflow of fluid from said pump body into said inflow connector and inflow conduit,
- an outflow one-way valve disposed between said pump body and said outflow connector, said outflow one-way valve being adapted to permit flow of fluid from said pump body into said outflow connector and into said outflow conduit but restricting backflow of fluid from said outflow conduit and outflow connector into said pump body.

2. (Original) The manually operable pump of claim 1, wherein said inflow conduit is selected from the group consisting of a standard chest tube, an endotracheal tube, and a catheter.

3-5. (Cancelled).

6. (Original) The manually operable pump of claim 1, wherein said compressible center portion is sized and configured to be compressed for effective pump operation by an operator using only one hand.

7. (Original) The manually operable pump of claim 1, wherein said compressible center portion is sized and configured to be compressed for effective pump operation by an operator or operators using two hands.

8. (Original) The manually operable pump of claim 1, wherein said compressible center portion is sized, shaped, and configured to be compressed for effective pump operation by an operator using foot compression on said center portion.

9. (Original) The manually operable pump of claim 1, wherein said exterior of said compressible center portion is at least partially covered by a textured surface.

10. (Original) The manually operable pump of claim 1, wherein said pump is effective in removing fluids, blood clots, and air from a body cavity of a subject suffering from hemopneumothorax.

11. (Original) The manually operable pump of claim 1, wherein said pump is adapted to be connected to an autotransfusion device.

12. (Original) The manually operable pump of claim 1, wherein said inflow one-way valves and said outflow one-way valves are effective to allow fluid passage through said inflow and outflow valves when said pump is so positioned such that all power for fluid flow is provided by gravity alone.

13. (Original) The manually operable pump of claim 1, wherein said pump is effective to remove fluid from said body cavity of a subject using manually provided power alone.

14. (Original) The manually operable pump of claim 1, being a first pump, is adapted for connection to at least one additional manually operable pump in series so as to provide a manually operable pump system.

15. (Original) The manually operable pump of claim 1, wherein said pump effectively removes blood, blood clots, fluid, and air from a body cavity, the pump generating a negative pressure in the range of 5 mm to 100 mm Hg.

16. (Currently amended) A method of removing fluid from a body cavity of a subject, the method comprising:

providing a manually operable pump ~~according to claim 1,~~ comprising a pump body interposed between two one-way valves and an inflow conduit coupled to one of the valves, compression of the pump body initiating unidirectional fluid flow through the inflow conduit from a distal end to a proximal end thereof;

inserting ~~a~~ the distal end of ~~said outflow~~ the inflow conduit into ~~a~~ the body cavity ~~of said subject from which fluid is to be removed,; and~~
manually compressing ~~said compressible center portion of said~~ the pump body intermittently ~~so as~~ to remove fluid from ~~said~~ the body cavity.

17. (New) A manually operable pump for removing fluids from a body cavity of a subject, comprising:

a pump body comprising a compressible portion extending between a first end and a second end of the pump body, the first end of the pump body in fluid communication with the second end of the pump body;
a first one-way valve in fluid communication with the first end of the pump body to provide unidirectional fluid flow into the pump body; and
a second one-way valve in fluid communication with the second end of the pump body to provide unidirectional fluid flow out of the pump body.

18. (New) The pump of claim 17, further comprising
an inflow conduit having a proximal end coupled to the first one-way valve
and a distal end in fluid communication with the body cavity;
an outflow conduit having a distal end coupled to the second one-way valve
and a proximal end in fluid communication with a fluid receptacle,
wherein fluid in the pump body are expelled via the second one-way
valve upon compression of the pump body compressible portion, and
wherein fluid in the body cavity enters the pump body via the first
one-way valve upon decompression of the pump body compressible
portion.
19. (New) A system for removing fluids from a body cavity, comprising:
a fluid receptacle for receiving the fluids from the body cavity; and
a manually operable pump in fluid communication with both the body cavity
and the fluid receptacle, operation of the pump generating a negative
pressure relative to the body cavity to transfer fluid from the body
cavity to the fluid receptacle.
20. (New) The system of claim 19, wherein the manually operable pump
comprises a pump body interposed between two one-way valves, compression of the pump body
initiating unidirectional fluid flow from the body cavity to the fluid receptacle.
21. (New) The system of claim 19, further comprising an implantable catheter in
fluid communication with the manually operable pump.
22. (New) The system of claim 21, further comprising an inflow connector
coupled to the implantable catheter and a first end of the manually operable pump, an outflow
conduit coupled to the fluid receptacle, and an outflow connector coupled to the outflow conduit
and a second end of the manually operable pump opposite the first end of the manually operable
pump.

23. (New) The system of claim 19, wherein the manually operable pump generates a fluid flow of approximately one liter per minute.

24. (New) A method of removing fluid from a body cavity of a subject, comprising:

attaching a manually operable pump to a proximal end of an implanted catheter, the manually operable pump in fluid communication with a fluid receptacle;

generating a negative pressure via the manually operable pump to initiate fluid flow from the body cavity toward the fluid receptacle; and

positioning the manually operable pump to flow fluid from the body cavity to the fluid receptacle with the aid of gravity.

25. (New) The method of claim 24, wherein the step of generating a negative pressure comprises compressing a pump body interposed between two one-way valves to initiate unidirectional fluid flow from the body cavity to the fluid receptacle.